

REPLACEMENT IDS TO CORRECT DEFICIENCIES

Page 1 of 3

FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT				ATTY. DOCKET NO. 1533.1010002		APPLICATION NO. To be assigned	
				APPLICANT O'Donohue et al.			
				FILING DATE Herewith		GROUP <u>1652</u> To be assigned	

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
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FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
DJS	AR	1	Berry, A., "Improving production of aromatic compounds in <i>Escherichia coli</i> by metabolic engineering," <i>TIBTECH</i> 14:250-256 (1996)
DJS	AS	1	Flores, N. et al., "Pathway engineering for the production of aromatic compounds in <i>Escherichia coli</i> ," <i>Nature Biotechnol.</i> 14:620-623 (1996)
DJS	AT	1	Inbar, L. et al., "Natural-abundance ¹³ C nuclear magnetic resonance studies of regulation and overproduction of L-lysine by <i>Brevibacterium flavum</i> ," <i>Eur. J. Biochem.</i> 149:601-607 (1985)

EXAMINER <u>Darrell Steadman</u>	DATE CONSIDERED <u>03-28-01</u>
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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
1533.1010002APPLICATION NO.
To be assignedAPPLICANT
O'Donohue et al.FILING DATE
HerewithGROUP 1652
To be assignedJc877 U.S. PTO
09/621448

U.S. PATENT DOCUMENTS

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	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

DJS	AR	2	Ishino, S. et al., ¹³ C Nuclear Magnetic Resonance Studies of Glucose Metabolism in L-Glutamic Acid and L-Lysine Fermentation by <i>Corynebacterium Glutamicum</i> , "J. Gen. Appl. Microbiol. 37:157-165 (1991)
DJS	AS	2	Kinoshita, S. et al., "L-Lysine Production Using Microbial Auxotroph," J. Gen. Appl. Microbiol. 4:128-129 (1958)
DJS	AT	2	Marx, A. et al., "Determination of the Fluxes in the Central Metabolism of <i>Corynebacterium glutamicum</i> by Nuclear Magnetic Resonance Spectroscopy Combined with Metabolite Balancing," Biotechnol. Bioengineering 49:111-129 (1996)

EXAMINER

Dwight Steadman

DATE CONSIDERED

03-28-01

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FORM PTO-1449 INFORMATION DISCLOSURE STATEMENT				ATTY. DOCKET NO. 1533.1010002		APPLICATION NO. 09/621,448 To be assigned	
				APPLICANT O'Donohue et al.			
				FILING DATE Herein		GROUP To be assigned 1652	

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	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
DJS	AR	3	Marx, A. et al., "Response of the Central Metabolism in <i>Corynebacterium glutamicum</i> to the use of an NADH-Dependent Glutamate Dehydrogenase," <i>Metabolic Engineering</i> 1:35-48 (January 1999)
DJS	AS	3	Walker, T.E. et al., " ¹³ C Nuclear Magnetic Resonance Studies of the Biosynthesis by <i>Microbacterium ammoniaphilum</i> of L-Glutamate Selectively Enriched with Carbon-13," <i>J. Biol. Chem.</i> 257:1189-1195 (1982)
DJS	AT	3	Swiss-Prot Accession No. P77895, Swiss Prot 10 No. G6P1_MYCTU (July 15, 1998)

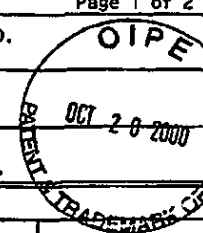
EXAMINER	DATE CONSIDERED
<i>[Signature]</i>	04/28/03

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REPLACEMENT TO CORRECT DEFICIENCIES

Page 1 of 2

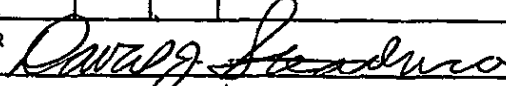
FORM PTO-1449 FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT				ATTY. DOCKET NO. 1533.1010002		APPLICATION NO. 09/621,448	
				APPLICANT O'Donohue et al.			
				FILING DATE July 21, 2000		GROUP 1632 1652	



U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
DJS	AA1	5,631,150	05/20/1997	Harkki et al.	435	105	01/03/1995
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	AN						Yes No
	AO						Yes No
	AP						Yes No

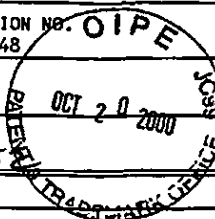
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
DJS	AR	4	Dominguez, H. et al., "Carbon-flux distribution in the central metabolic pathways of <i>Corynebacterium glutamicum</i> during growth on fructose," <i>Eur. J. Biochem.</i> 254:96-102 (May 1998)
DJS	AS	4	Fitzpatrick, R. et al., "Construction and characterization of <i>recA</i> mutant strains of <i>Corynebacterium glutamicum</i> and <i>Brevibacterium lactofermentum</i> ," <i>Appl. Microbiol. Biotechnol.</i> 42:575-580 (1994)
DJS	AT	4	O'Gara, J.P. and L.K. Dunican, "Direct Evidence for a Constitutive Internal Promoter in the Tryptophan Operon of <i>Corynebacterium glutamicum</i> ," <i>Biochem. & Biophys. Res. Comm.</i> 203:820-827 (1994)

EXAMINER 	DATE CONSIDERED 03-28-01
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FORM PTO-1449

FIRST SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
1533.1010002APPLICATION NO.
09/621,448APPLICANT
O'Donohue *et al.*FILING DATE
July 21, 2000GROUP
1632/65

U.S. PATENT DOCUMENTS

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	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

DJS	AR	2	Vallino, J.J. and G. Stephanopoulos, "Metabolic Flux Distributions in <i>Corynebacterium glutamicum</i> During Growth and Lysine Overproduction," <i>Biotechnol. & Bioengineering</i> 41:633-646 (1993)
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EXAMINER

David J. Friedman

DATE CONSIDERED

03-28-01

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FORM PTO-1449 SECOND SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT	ATTY. DOCKET NO. 1533.1010002/SRL/CMB	APPLICATION NO. 09/621,448
	APPLICANT O'DONOHUE et al.	
	FILING DATE July 21, 2000	GROUP 1652 1652

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
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FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
DJS	AL1	WO 94/10325	05/11/1994	WIPO	X	X	Yes No
DJS	AM1	EP 0 733 712 A1	09/25/1996	Europe			Yes No
DJS	AN1	FR 2 772 788	06/25/1999	France			Yes X No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR		
DJS	AS	5	Boles, E. et al., "The role of the NAD-dependent glutamate dehydrogenase in restoring growth on glucose of a <i>Saccharomyces cerevisiae</i> phosphoglucose isomerase mutant," <i>Eur. J. Biochem.</i> 217:469-477, Federation of European Biochemical Societies (1993).
DJS	AT	5	González Siso, M.I. et al., "Reoxidation of the NADPH produced by the pentose phosphate pathway is necessary for the utilization of glucose by <i>Kluyveromyces lactis</i> rag2 mutants," <i>FEBS Lett.</i> 387:7-10, Federation of European Biochemical Societies (1996).

EXAMINER <i>David J. Steadman</i>	DATE CONSIDERED 04-02-01
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	



FORM PTO-1449

SECOND SUPPLEMENTAL
INFORMATION DISCLOSURE STATEMENTATTY. DOCKET NO.
1533.1010002/SRL/CMBAPPLICATION NO.
09/621,448APPLICANT
O'DONOHUE et al.FILING DATE
July 21, 2000GROUP
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U.S. PATENT DOCUMENTS

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	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

DJS	AR	6	Moritz, B. et al., "Kinetic properties of the glucose-6-phosphate and 6-phosphogluconate dehydrogenases from <i>Corynebacterium glutamicum</i> and their application for predicting pentose phosphate pathway flux in vivo," <i>Eur. J. Biochem.</i> 267:3442-3452, Federation of European Biochemical Societies (June 2000).
DJS	AS	6	Shi, H. et al., "Effect of Modifying Metabolic Network on Poly-3-Hydroxybutyrate Biosynthesis in Recombinant <i>Escherichia coli</i> ," <i>J. Biosci. Bioeng.</i> 87:666-677, Elsevier Science (June 1999).
DJS	AT	6	Vallino, J.J. and Stephanopoulos, G., "Carbon Flux Distributions at the Pyruvate Branch Point in <i>Corynebacterium glutamicum</i> during Lysine Overproduction," <i>Biotechnol. Prog.</i> 10:320-326, American Chemical Society and American Institute of Chemical Engineers (1994).

EXAMINER

Daniel J. Seadman

DATE CONSIDERED

04-02-01

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July 21, 2000GROUP
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U.S. PATENT DOCUMENTS

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	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

DJS	AR	2	Vallino, J.J. and Stephanopoulos, G., "Carbon Flux Distributions at the Glucose 6-Phosphate Branch Point in <i>Corynebacterium glutamicum</i> during Lysine Overproduction," <i>Biotechnol. Prog.</i> 10:327-334, American Chemical Society and American Institute of Chemical Engineers (1994).
DJS	AS	1	Walfridsson, M. et al., "Xylose-Metabolizing <i>Saccharomyces cerevisiae</i> Strains Overexpressing the <i>TKL1</i> and <i>TAL1</i> Genes Encoding the Pentose Phosphate Pathway Enzymes Transketolase and Transaldolase," <i>Appl. Environ. Microbiol.</i> 61:4184-4190, American Society for Microbiology (1995).
DJS	AT	2	Patent Abstracts of Japan, Publication No. 09224661, published September 2, 1997.

EXAMINER

Dariusz Siedman

DATE CONSIDERED

04-02-01

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1533.1010002/SRL/CMBAPPLICATION NO.
09/621,448APPLICANT
O'DONOHUE et al.FILING DATE
July 21, 2000GROUP
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U.S. PATENT DOCUMENTS

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	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

DJS	AR	8	Patent Abstracts of Japan, Publication No. 09224662, published September 2, 1997.
DJS	AS	8	Dialog File 351, Accession No. 12615741, Derwent WPI English language abstract for FR 2 772 788 (Document AN1). 6/25/1999
DJS	AT	8	International Search Report for International Application No. PCT/US00/19914, mailed December 28, 2000.

EXAMINER

David J. Steadman

DATE CONSIDERED

04-02-00

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FORM PTO-1449

THIRD SUPPLEMENTAL
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ATTY. DOCKET NO.
1533.1010002/MAC/AGU

APPLICATION NO.
09/621,448

APPLICANT
O'Donohue et al.

FILING DATE
July 21, 2000

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U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA						
<i>DJS</i>	AB1	5,846,790	12/08/1998	Kimura et al.	/	/	02/18/1997
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	AM						Yes No
	AN						Yes No
<i>DJS</i>	AO1	EP 0 780 477 A1	06/25/1997	Europe			Yes No
<i>DJS</i>	AP1	WO 01/07626 A2	02/01/2001	WIPO			Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

<i>DJS</i>	AR	2	Cocaign-Bousquet, M., and Lindley, N.D., "Pyruvate overflow and carbon flux within the central metabolic pathways of <i>Corynebacterium glutamicum</i> during growth on lactate," <i>Enzyme Microb. Technol.</i> 17:260-267, Elsevier Science Inc. (1995).
<i>DJS</i>	AS	2	Eikmanns, B.J., et al., "Cloning, Sequence Analysis, Expression, and Inactivation of the <i>Corynebacterium glutamicum</i> icd Gene Encoding Isocitrate Dehydrogenase and Biochemical Characterization of the Enzyme," <i>J. Bacteriol.</i> 177:774-782, American Society for Microbiology (1995).
<i>DJS</i>	AT	2	International Search Report for International Application No. PCT/US 00/19914, mailed March 20, 2001.

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DS	AR	10	Suye, S.-i., "Coenzyme regeneration with malic enzyme reaction system," Recent Res. Devel. in Fermentation & Bioeng. 1:55-64, Research Signpost (August 1998).
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